

# BROADBAND LIGHT SOURCE DEVICE

## Abstract

A broadband light source (200) includes a pump laser (20), a lanthanide series element-doped fiber (22) having a predetermined length, a WDM device (21) with at least three ports, and first and second optical isolators (23, 28). Two ports (26, 29) of the WDM device respectively connect with the laser and the fiber. The first isolator connects with a third port of the WDM device. The second isolator connects with the fiber. The first and second isolators are located in an output passing of the source for reducing reflection of output light. Pump light is coupled to the fiber by the WDM device, and is amplified by the fiber. A part of the amplified light passes the second isolator and is exported. A remaining part of the amplified light is coupled to the first isolator by the WDM device, and is exported via an output end of the first isolator.